In the Specification

Please replace the paragraph appearing at page 9, line 14 carrying over to page 10, line 4 of the specification with the following new paragraph:

C2

Having established a desired steering direction, operator 141 monitors an actual roll orientation indicator 162. As described in the Mercer patents, roll orientation may be measured within the boring tool by a roll sensor (not shown). The measured roll orientation may then be encoded or impressed upon locating signal 98 and received by locator/controller 140 using antenna 126. This information is input to CPU 144 as part of the "Locator Signal Data" indicated in Figure 4. CPU 144 then causes the measured/actual roll orientation to be displayed by actual roll orientation indicator 162. In the present example, operator 141 can see that the actual roll orientation is at the 2 o'clock position. Once the desired roll orientation matches the actual roll orientation, the operator will issue an advance command by moving joystick 148 forward. Advancement or retraction commands for the boring tool can only be maintained by continuously holding the joystick in the fore or aft positions. That is, a stop command is issued when joystick 148 is returned to its center position. If the locating receiver were accidentally dropped, the joystick would be released and drilling would be halted. This auto-stop feature will be further described in conjunction with a description of components which are located at the drill rig.

Please replace the paragraph appearing at page 12, lines 9-22 with the following new paragraph:

C3

Still referring to Figures 2 and 5, the forward, stop and retract command indications eliminate the need for other forms of communication between the drill rig operator and the locator/controller operator such as the walkie-talkies which were typically used in the prior art. At the same time, it should be appreciated that each time a new command is issued from the locator/controller, an audible signal may be provided to the drill rig operator such that the new command does not go unnoticed. Of course, the drill rig operator must also respond to roll commands according to roll orientation display 154 by setting the roll of the boring tool to the desired setting. In this regard, it should be mentioned that a second arrangement (not shown) of components at the drill rig may be implemented with a transmitter at the locator/controller in place of transceiver 146 and a receiver at the drill rig in place of transceiver 106 so as to establish a one-way telemetry link from the boring tool to the drill rig. However, in this instance, features such as operations status display 174 and drill string status display 164 cannot be provided at the locator/controller.

Please replace the paragraph appearing from page 12, line 24, to page 13, line 18, with the following:

C4

It should be appreciated that the first and second component arrangements described with regard to FIG. 5 contemplate that the drill rig operator may perform tasks including adding or removing drill pipe sections 88 from the drill string and monitoring certain operational aspects of the operation of the drill rig. For example, the drill rig operator should insure that drilling mud (not shown) is continuously supplied to the boring tool so that the boring tool does not overheat whereby the electronics packaged housed therein would be damaged. Drilling mud may be monitored by the drill rig operator using a pressure gauge or a flow gauge. As another example, the drill rig operator may monitor the push force being applied to the drill string by the drill rig. In the past, push force was monitored by "feel" (i.e., reaction of the drill rig upon pushing). However, push force may be directly measured, for instance, using a pressure or force gauge. If push force becomes excessive as a result of encountering an underground obstacle, the boring tool or drill string may be damaged. As a final